

Atty. Dkt. No. DOCKET_NO:TSRI 184.2C2

CHANGES MADE." All pending claims following entry of the amendments requested herein are shown below.

21. (Amended three times) A plant, comprising:

a) plant cells containing nucleotide sequences encoding a biologically functional immunoglobulin product comprising an immunoglobulin heavy chain polypeptide and an immunoglobulin light chain polypeptide wherein said nucleotide sequences also encode a leader sequence for each polypeptide and wherein said light chain polypeptide or said heavy chain polypeptide or both are not full length; and

b) biologically functional immunoglobulin product encoded by said nucleotide sequences, wherein each leader sequence forms a secretion signal that is cleaved from each of said immunoglobulin heavy chain and light chain polypeptide following proteolytic processing.

32. The plant of claim 21, wherein the immunoglobulin product comprises an Fab.

33. The plant of claim 21, wherein the immunoglobulin product comprises an Fab'.

34. The plant of claim 21, wherein the immunoglobulin product comprises an F(ab')₂.

35. The plant of claim 21, wherein the immunoglobulin product comprises an Fv.

36. The plant of claim 21, wherein the immunoglobulin product comprises an antibody.

37. The plant of claim 21, wherein the immunoglobulin product comprises a paratope.

38. The plant of claim 21, wherein the immunoglobulin product comprises a glycosylated immunoglobulin molecule free of sialic acid residues.

39. The plant of claim 21, wherein the plant is a dicotyledonous plant.

40. The plant of claim 21, wherein the plant is a monocotyledonous plant.

41. The plant of claim 21, wherein the plant is an alga.

43. (Twice amended) A plant, comprising:

a) plant cells containing nucleotide sequences each encoding an immunoglobulin single polypeptide product containing at least an immunoglobulin heavy chain polypeptide or portion thereof, an immunoglobulin light chain or portion thereof, or

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both an immunoglobulin heavy chain or portion thereof and an immunoglobulin light chain or portion thereof, wherein said nucleotide sequences encode a leader sequence forming a secretion signal wherein said cells containing nucleotide sequence encoding an immunoglobulin heavy chain polypeptide or portion thereof do not contain nucleotide sequence encoding a light chain, while said cells containing nucleotide sequence encoding an immunoglobulin light chain polypeptide or portion thereof do not contain nucleotide sequence encoding a heavy chain; and

b) immunoglobulin single polypeptide product encoded by said nucleotide sequences, wherein said leader sequence is cleaved from said polypeptide product following proteolytic processing.

44. The plant of claim 43, wherein the immunoglobulin product is a single-chain antigen-binding protein.

45. The plant of claim 43, wherein the immunoglobulin product comprises a heavy chain.

46. The plant of claim 43, wherein the immunoglobulin product is capable of specifically binding to an antigen.

47. The plant of claim 43, wherein the immunoglobulin product forms a binding site specific for a predetermined antigen.

48. The plant of claim 43, wherein the immunoglobulin product is an abzyme.

53. The plant of claim 43, wherein the immunoglobulin product comprises a paratope.

54. The plant of claim 43, wherein the immunoglobulin product comprises a VH region.

56. The plant of claim 43, wherein the immunoglobulin product comprises an antibody.

57. The plant of claim 43, wherein the plant is a dicotyledonous plant.

58. The plant of claim 43, wherein the plant is a monocotyledonous plant.

59. The plant of claim 43, wherein the plant is an alga.